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Cc: Clifford Firstenberg[Clifford.Firstenberg@tierra-inc.com]; Len Warner[lwarner@louisberger.com]; AccardiDey, AmyMarie[aaccardidey@louisberger.com]
From: Naranjo, Eugenia
Sent: Wed 3/4/2015 1:43:08 PM
Subject: FW: Comments on Tierra Sediment Pre-Program PE Report
20150123 NBSA RA Sediment Pre-Program PE Report.pdf

Carlie,

AmyMarie prepared the information below in response to your question as to whether the CPG or Berger experienced difficulties with fish tissue PE analysis for pesticides during the 2009 Lower Passaic River effort. Apparently both the CPG and Berger used a different certified reference material than Tierra is currently using and did not experience difficulties meeting the pesticide acceptance criteria. AmyMarie also has some questions and comments on the attached report, which are provided below. Please feel free to contact me and/or AmyMarie with any questions.

eugenia

In response to Carlie's request, I investigated the 2010 tissue performance evaluation samples. Tierra is currently analyzing NIST SRM 1974C and reported issues with the pesticide analysis.

In 2010, the CPG analyzed NIST SRM 1974B, which is an earlier version of this reference material (refer to Appendix Q of the October 2009 Benthic QAPP). I do not have any documentation from the CPG of a nonconformance for pesticides from their lab Maxxam Analytical. According to Benthic QAPP Worksheet 28, PE samples were analyzed with every batch. If the PE exceeded the measurement performance criteria, the corrective actions were to reanalyze as necessary and then flag data accordingly. The PE results are available in the CPG database.

Malcolm Pirnie analyzed NIST SRM 1946c with each batch of split samples; the results were within the Oversight QAPP measurement performance criteria for pesticides.

I also read through Tierra's Sediment PE Technical Memorandum (dated January 23, 2015). I have a few comments on this document:

1. Page 6, Table 3.3-1, Footnote B: The Tierra Crab-Clam QAPP states that the measurement performance criteria for pesticides will be the range specified by the manufacturer. Table 3.3-1, Footnote

B suggests that an alternative criterion was used. Please justify the change in acceptance criterion and provide the regression equations used.

2. Page 8, Top Paragraph on PAH: To avoid potential confusion in interpretation of the data, Tierra's laboratory should report the co-eluting PAH compounds as "benzo(k/j)fluoranthene" and "dibenzo(a,h/a,c)anthracene." A co-elution note in the database will likely be lost during data manipulations.

3. Page 9, Table 3.7-1, Footnote B: The Tierra Crab-Clam QAPP states that the measurement performance criteria for metals will be +/- 30% of the certified value. Table 3.7-1, Footnote B suggests that an alternative criterion was used. Please justify the change in acceptance criterion and provide the regression equations used.

4. General Comment: Tierra demonstrated that their laboratories failed to meet the measurement performance criteria for PCB95, benzo(a)pyrene, and perylene for sediments. Please clarify if these compounds will be flagged or if the failures communicated to the data validator.

Regards

AM